REMARKS

This Response is in reply to the Final Office Action mailed on June 30, 2004. Claims 1-8,

10 and 12 are pending in this application. Claims 1 and 10 have been amended. Claims 13-19 have

been canceled. No new matter has been added. Entry and consideration of the amendments and

following remarks is respectfully requested.

35 U.S.C. §112 Rejections

Claims 1-19 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claims the subject matter which applicant regards as

the invention. Claims 1 and 10 have been amended to overcome the rejections. Claim 1 was

amended to emphasize that the virtual image is a model of a real field environment portion of the

process elements, which was already presented in claim 10. Also, claims 1 and 10 have been

amended to clarify that the graphic image shows the location of a process element in the model of

the real field environment portion of the process elements. Claims 13-19 have been canceled.

Therefore, it is respectfully requested that the Examiner withdraw the 35 U.S.C. §112 rejection.

Claims Objections

Claims 13-18 are objected to as being a substantial duplicate thereof of claims 3-8,

respectively. Claims 13-19 have been canceled. Therefore, it is respectfully requested that the

Examiner withdraw the objection.

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35 U.S.C. §103 Rejections

Claims 1-5, 7, 10, and 12 were rejected under 35 U.S.C. §103 (a) as being unpatentable over

Brinzer (U.S. Patent 6,031,453) and Takahara et al. (U.S. Patent 5,412,400). These rejections are

respectfully traversed.

In Applicant's invention, there is a terminal for displaying a process graphic diagram which

illustrates the process to be controlled. The process graphic diagram consists of symbols

representing the process elements, for example, pumps, pipes etc. and information about the status

of the process. The operator can control the process by monitoring the process graphic diagram. By

clicking with the mouse the process elements in the process graphic diagram, the operator can call

graphic images of the process elements on the display. The graphic image is a 3-dimensional virtual

image. A virtual image is not a real image of the process element, but an artificially produced image

formed by software that corresponds to a real image. It also shows a model of the real field

environment portion of the process element. Thus, the virtual image is a model of the real field

environment portion and it is possible for the operator to see basically everywhere in the created

virtual environment. The operator can also "virtually wander" in the process facilities. This helps

the operator to get familiar with the process and learn the actual locations of the process elements.

This is also very useful for maintenance personnel as the locations of the process elements needing

attention can be checked virtually before entering the plant area.

The term "virtual" may be defined as follows: "not physically existing as such but made by

software to appear to do so" (The New Oxford Dictionary, 1998). Virtual image is thus not a video

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surveillance image provided by a TV-camera. Consequently, if any actual fault is caused in the

process elements, e.g. a valve is broken and it is causing water to spray around, it (the water

spraying) can not be seen in the virtual image. Another example is a situation where two tanks are

connected by a pipe and appear in the same process graphic diagram. The pipe on the display of the

process graphic diagram is only 20 millimetres long. When the same tanks and pipe are being

brought up as a graphic image, the operator notices that the pipe is 300 metres long.

Brinzer does not teach a graphic image which is a virtual image of the selected part of the

process graphic diagram as claimed in the present invention. Instead, Brinzer teaches only a

geometric 2-dimensional structure of a control cabinet. Fig. 5 of Brinzer shows only a geometric

structure of a control cabinet (col. 2, line 34; col. 4, lines 20-21).

Brinzer discloses a method for monitoring an automation system which is controlling a

technical process. In the automation system, there are control cabinets where the circuit elements

are attached. Brinzer provides a solution for locating a fault in the automation system, i.e. in the

circuit elements in the control cabinet. According to Brinzer, the prior art systems have displays that

graphically display the process to be monitored and when a fault in circuit elements occurs, the fault

is displayed by showing it's consequences to the process and not the broken component itself nor

the location of the fault or the rack or the position of the circuit element in the rack (col. 1, lines 17-

37). As a solution to this problem, Brinzer provides a fault message to appear on the display (col.

3, lines 62-67). By clicking the fault message the user calls up the fault display function which is

a display of the control cabinet in which the fault has occurred (col. 4, lines 8-13). The display

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shows the geometric structure of the control cabinet, which structure is determined from the planning

and design data (col. 4 lines 14-21). The module with the fault can be seen in the retrieved structure

of a control cabinet by color marking (col. 4 lines 24-35). Thus, Brinzer only suggests to use the

system for locating the fault.

The invention of Takahara does not show a model of a real field environment portion of the

process element. Also, it is not possible to "wander" in the image. The window displaying method

only shows the process element towards which the camera is pointed at the angle the camera is

situated.

Takahara discloses a window displaying method for a process control system. For each

display, there is a display management area file where the display contents for each display are

determined (col. 7, lines 49-68). The purpose is to manage the displays so that they do not cover

each other and hinder seeing the other display frames. In the process to be controlled, TV cameras

providing real images of the process elements are installed on the site of the plant. They cover the

control devices and pick up images of the control devices and the operating state of them (col. 12,

lines 27-32). One of the displays in the process control system is a display for inputting the image

from a TV camera following the control device from which information is needed. The TV cameras

in Takahara thus provide on-line surveillance information of a control device.

Combining the Brinzer and Takahara references would not lead to a solution according to

the present invention, but only to a solution where a TV-camera is monitoring a control cabinet with

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subracks in a process control system and the TV camera is proving real image information of the

control cabinet on-line.

Claim 6 was rejected under 35 U.S.C. §103 (a) as being unpatentable over Brinzer,

Takahara and Itoh (EP 0716364). This rejection is respectfully traversed.

Regarding claim 6, Itoh (EP 0716364) shows an operator support system where the display

system can be a portable wireless system. Combining Brinzer, Takahara and Itoh would lead to a

solution where the TV-camera is monitoring a control cabinet in a process control system and the

TV camera is proving real image information of the control cabinet on-line. The real image

information could be monitored by a portable display system. This is completely different from the

present invention.

Claim 8 was rejected under 35 U.S.C. §103(a) as being unpatentable over Brinzer, Takahara

and Uchida (EP 0626697). This rejection is respectfully traversed.

Regarding claim 8, the presented Uchida presents a plant monitoring and diagnosing method

where a plant structure image can be enlarged. Combining Brinzer, Takahara and Uchida would lead

to a solution where TV-camera is monitoring a control cabinet in a process control system and the

TV camera is proving real image information of the control cabinet on-line. The real image

information could be enlarged for clarifying a certain part of the control cabinet. This is completely

different from the present invention.

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The Applicant submits that there is absolutely no teaching or suggestion in Brinzer that

would lead one to combine the teachings of that reference with Takahara, Itoh or Uchida. None of

the references teach or suggest the present invention. As such, absent some motivation, one of

ordinary skill in the art would not combine the invention of Brinzer with the teachings of Takahara,

Itoh or Uchida. Furthermore, the Applicant submits that even if the references were combined, the

result would not be the present invention as discussed above.

Accordingly, the Applicant asserts that amended claim 1 is patentable over the cited prior art.

Furthermore, since claims 2-8, 10 and 12 depend from independent claim 1, and for the reasons

stated above, these claims are allowable as well. It is therefore respectfully requested that the

rejection of the claims under 35 U.S.C. §103(a) be withdrawn.

Conclusion

In view of the amendments to the claims 1 and 10 made herein and the arguments presented above, it is submitted that the Examiner's rejections have been overcome and should be withdrawn. The application should now be in condition for allowance.

The Applicant notes that there is no indication that the drawings are acceptable. The Applicant respectfully requests that the Examiner provide indication that the drawings are accepted by the Examiner in the next formal communication.

Should any changes to the claims and/or specification be deemed necessary to place the application in condition for allowance, the Examiner is respectfully requested to contact the undersigned to discuss the same.

A petition for a one-month extension of time with the requisite fee is attached herewith. In the event that any other extensions and/or fees are required for the entry of this Amendment, the Patent and Trademark Office is specifically authorized to charge such fee to Deposit Account No. 50-0518 in the name of Steinberg & Raskin, P.C.

An early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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